FDA WORKSHOP:
SURROGATE ENDPOINTS IN CLINICAL TRIALS OF KIDNEY TRANSPLANTATION
September 28, 2015
8:00am to 6:00pm

8 am	Registration
8:15 am	**Welcome, Topics and Goals** Speaker: *Renata Albrecht, MD (FDA)*
Session 1: Unmet Medical Needs in Kidney Transplantation Moderator: Renata Albrecht The goal of Session 1 is to identify the causes of unmet medical need in kidney transplantation specifically long term survival and the conditions that lead to long term graft loss. The remainder of the session will focus on four of these conditions: medical non-adherence, subclinical inflammation/injury, highly sensitized patient, de novo donor specific antibodies. The cause of the condition, patient characteristics, incidence, diagnostic criteria, and patient selection for clinical trials will be covered during the presentations. The goal is to understand pathophysiology and biology of the condition, as well as the frequency and incidence, and natural history (when it first appears, what are the associated findings).	
8:30 am	Unmet Medical Need In Kidney Transplant Recipients – The Causes of Long Term Graft Loss Speaker: *Roslyn Mannon, MD (U. of Alabama)*
9:00 am	Unmet Medical Need Topic #1: Medical Non Adherence, Including Iatrogenic, and Long Term Graft Loss (Quality of Adherence to Targeted Therapeutic Drug Concentration and Regimen: Patient; Dose Adjustment; Target Ranges) Speaker: *Rita Alloway, PharmD (U. of Cincinnati)*
9:25 am	Unmet Medical Need Topic #2: Patients with Subclinical Injury to the Kidney and Long Term Graft Loss Speaker: *Mark Stegall, MD (Mayo Clinic)*
9:40 am	Unmet Medical Need Topic #3: Patients with *De Novo* Donor Specific Antibodies Speaker: *Peter Nickerson, MD (University of Manitoba, Canada)*
9:55 am	**BREAK**
10:10 am **10:25 am**	Unmet Medical Need Topic #4: Highly Sensitized Patient Speakers: *Stanley Jordan, MD (Cedars-Sinai)* - pediatrics and adult *Steve Woodle, MD(U of Cincinnati)* - adults
10:40 am	Questions and Discussion: Which of these four conditions associated with poor long term graft survival have enough information on etiology/biology/pathophysiology? What additional information is needed to identify the risk of graft failure associated with these four conditions, other prognostic factors, patient enrollment criteria and enrichment strategies?

Session 2: Surrogate Endpoints and Biomarker Examples from other Therapeutic Areas Moderator: Ozlem Belen The goal of Session 2 is to provide a background on surrogate endpoints, and examples where they have been used successfully (or not). A focused summary of selected FDA guidance documents that can help in understanding and incorporating surrogate endpoints in clinical trials will be provided.	
11:00 am	Traditional Endpoints and Surrogate Endpoints Speaker: *Thomas Fleming, PhD (U of Washington)*
11:25 am	FDA Experience with Surrogate Endpoints – HIV Speaker: *Marc Cavaillé-Coll, MD, PhD (FDA).*
11:35 am	FDA Experience with Biomarker Qualification (Galactomannan - Patient Selection) Speaker: *Shukal Bala, PhD (FDA)*
11:45 am	FDA Guidance on Drug Development Tools, Enrichment Strategies, and Companion Diagnostics (highlights) Speaker: *Yan Wang, PhD (FDA)*
12:00 pm	Questions and Discussion:
12:15 pm	LUNCH
Session 3: Potential Surrogate Endpoints in Kidney Transplantation Moderator: Ergun Velidedeoglu, Marc Cavaille Coll, Shukal Bala The goal of Session 3 is to discuss the available evidence (pathophysiologic, epidemiologic, therapeutic, or other evidence) that the surrogate is likely to predict the clinical benefit (survival of the graft) . Clinical study data will be presented showing the association between the surrogate (predictive marker) and the long term outcome. Such information can then be used in designing a development program (Phase 1, Phase 2, and Phase 3) to evaluate therapies for the prevention or for the treatment of the condition.	
	Donor Specific HLA Antibodies and the Highly Sensitized Patient – Various Aspects/Different Perspectives Speakers:
1:00 pm	*Peter Nickerson, MD (U of Manitoba, Canada)*
1:15 pm	*Anat Tambur, DMD, PhD (Northwestern University)*
1:30 pm	*Stanley Jordan, MD (Cedar Sinai)*
1:45 pm	*Steve Woodle, MD (U of Cincinnati)*
	Histology In Kidney Transplantation – Subclinical Injury/Inflammation on Protocol Kidney Biopsy and Long Term Graft Function – Various Aspects/Different Perspectives > 1 year protocol biopsy Speakers:
2:00 pm	*Michael Mengel, MD (U of Alberta, Edmonton, Canada)*
2:15 pm	*Sundaram Hariharan, MD (U of Pittsburg)*
2:30 pm	*Philip O'Connell, MD, PhD (Westmead Millennium Institute, Sydney, Australia)*
2:45 pm	*Dirk Kuypers, MD, PhD (University Hospitals Leuven, Belgium)*
3:00 pm	*Mark Stegall, MD (Mayo Clinic)*

3:15 pm	BREAK
3:30 pm **3:45 pm** **4:00 pm** **4:15 pm**	Composite Endpoint of Allograft Function (GFR, Histology, DSA) and Long Term Graft Function Speakers: *Serena Bagnasco, MD (The Johns Hopkins Hospital)* *Alexandre Loupy, MD, PhD (Hôpital Necker, Paris, France)* *Lihui Zhao PhD (Northwestern University)* *Jesse Schold, PhD (Cleveland Clinic)*
4:30 pm	Questions and Discussion: What additional research is needed?
Session 4: Future Directions Moderator: Philip O'Connell The goal is to look at how challenges were addressed in the antimicrobial field and discuss the option and future directions in the transplantation field.	
5:00 pm	Example from Other Therapeutic Areas –Oncology, Infectious Diseases Speaker: *Renata Albrecht, MD (FDA)*
5:10 pm	Future Directions in Transplantation Speaker: *Randall Morris, MD, (Stanford University, Emeritus)*
5:30 pm	Questions and Discussion: What experiences in other therapeutic areas would be useful in kidney transplantation? Who are the stakeholders to include in the next steps: e.g. NIH, CMS, Industry, Patients, Think Tanks? What are the next steps?
6 pm	ADJOURN